elf atochem

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King of Prussia, PA 19406-0018

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Contains No CBI

October 15, 1992

8EHQ-92-12621

88920810004

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CERTIFIED MAIL

RETURN RECEIPT REQUESTED

Document Processing Center (TS-790)
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M St., S.W.
Washington, D.C. 20460

Attn: Section 8(e) Coordinator (CAP Agreement)

RE: Report Submitted Pursuant to the TSCA Section 8(e) Compliance Audit Program

CAP Identification Number: 8ECAP-0026

Dear Sir/Madam:

Pursuant to the Toxic Substances Control Act (TSCA) Section 8(e) Compliance Audit Program and the Agreement for TSCA Section 8(e) Compliance Audit Program (CAP Agreement) executed by Elf Atochem North America Inc. (Atochem) and the Environmental Protection Agency (EPA), Atochem is submitting the enclosed final report on studies to establish dermal LD_{50} and inhalation LC_{50} concentrations for trivinyltin chloride to the EPA. These studies do not involve effects in humans.

Nothing in this letter or the enclosed studies is considered confidential business information of Atochem.

The enclosed studies provide information on trivinyltin chloride. Its exact chemical name is chlorotriethylstannane and its CAS number is 10008-90-9.

The title of the enclosed study report is Toxicological Investigations of Trivinyltin Chloride. This report consists of several studies. The following is a summary of the adverse effects observed in the acute dermal application and vapor toxicity studies.

3/6/95

Groups of ten rats were exposed to atmospheres of trivinyltin chloride ranging from 20 to 400 ppm. The inhalation LC_{50} for rats was determined to be 95 ppm. Trivinyltin chloride was also applied to the depilated skin of rabbits. The dermal LD_{50} was determined to be 24 mg/kg.

To our knowledge, Atochem has not previously submitted any TSCA Section 8(e) notices or premanufacture notifications on the subject material.

Further questions regarding this submission may be directed to me at 215 337-6892.

Sincerely,

C.H. Farr, PhD, DABT
Manager, Product Safety
and Toxicology

Enclosures

/ FILED: CN 2184-85

TR91-784

REPORT

T-603

TOXICOLOGICAL INVESTIGATIONS OF TRIVINYLTIN CHLORIDE

Submitted to **Metal and Thermit Corporation**
New York, New York

Date **July 8, 1960**

Laboratory No. 79930

Vice-President

Food and Drug Research Laboratories
INCORPORATED

Maurice Avenue at 58th Street
Maspeth 78, New York City

CAS: 10008-90-9

The acute oral, dermal and vapor toxicity of a sample of colorless liquid identified as trivinyltin chloride were investigated. The tests were authorized by Metal and Thermit Corporation and the samples submitted on December 7, 1959.

I. Acute Oral Toxicity for Rats

The procedure employed is that described in the accompanying reports on other organotin compounds (e.g., Laboratory No. 79929).

Results:

A summary of the growth and mortality data are presented in Table 1. The gross symptoms observed were similar to those for tetravinyltin and are described in the report referred to above.

Most deaths occurred during the first week, except for one rat at the 2896 mg per kg level which died 16 days after dosing.

The character of the gross pathological changes were similar to those for tetravinyltin and are as described in that report.

The acute oral LD_{50} for the rat of trivinyltin chloride is estimated to be 1.91 ± 0.15 gm per kg body weight (Slope factor = 1.50 gm per kg).

II. Acute Dermal Toxicity in Rabbits

The acute dermal toxicity of trivinyltin chloride was examined by means of 24-hour applications to the depilated skin of rabbits. The approximate LD_{50} was determined with groups of three to six rabbits per dosage level.

The procedure employed, and the resultant observations, are similar to those described in the report referred to above.

Conclusion:

Trivinyltin dichloride is significantly more toxic by dermal administration than the tetravinyl analogue. Its acute dermal LD_{50} for rabbits is approximately 24 mg per kg compared to 500 mg per kg for the latter.

III. Acute Vapor Toxicity for Rats

The procedure is similar to that described in the report on tetravinyltin, referred to above. The observations, summarized in Table 3 indicate the nature of the toxic effects on inhalation to be the same as for tetravinyltin, but slightly less quantitatively. (It should be noted that trivinyltin is exceptionally noxious and irritating to personnel exposed to it).

Conclusion:

The acute vapor LD_{50} for the rat of trivinyltin chloride is 95 ± 14 ppm.

Table 1

Approximation of the Acute Oral Toxicity (LD_{50}) of Trivinyltin Chloride

Dose[a]	No. of Rats[b]	Average Body Weight[c] - - - - days - - - -			Number of Deaths - - - - days - -			Mortality
		0	14	21	0-7	7-14	14-21	
gm/kg		- - - - - gm - - - - -						per cent
.128	10	226	264	276				0
.256	10	201 (200)	242^{9}	257	1			10
.512	10	201	249	257				0
1.024	10	201 (208)	233^{9}	249	1			10
1.448	20	231	236^{17}	254	3			15
2.048	10	228 (232)	205^{5}	229	5			50
2.896	10	237 (203)	192^{2}	220	8		1	90
4.096	10	227	None	None	10			100

[a] Administered intragastrically to fasted rats as a 10 per cent dilution in equal parts of corn oil and 0.5 per cent carboxymethyl cellulose.

[b] Equal numbers of male and female rats.

[c] Figures in parentheses show average initial body weights of survivors; superscripts indicate number of survivors at 14 days.

Acute Oral Toxicity (LD_{50}) to Rats = 1.91 ± 0.15 gm per kg body weight
(Slope Factor = 1.50 gm per kg body weight)

Table 2

Reactions of Rabbits in Acute Dermal Toxicity Test with Trivinyltin Chloride

Dose[a]	Rabbit No.	Skin Irritation Score[b] - - - - - - days - - - - - - 1	2	4	7	14	21	Net Gain in Body Weight	Fate[c]	Mortality
mg/kg	(males)							kg		per cent
8	430	3	3	4	4	3	1	0.08	S21)	0
	472	3	3	5	4	3	2	0.08	S21)	
16	496	4	4	6	6	5	4	+0.03	)	
	484	4	5	6	5	5	4	0.0	)	
	510	3	3	5	5	5	5	0.04	S21)	0
	511	3	3	5	5	5	4	-0.05	S21)	
24	479	4	5	5	4	5	3	-0.36	)	
	477	4							D1)	50
	425	5	5						D2)	
	526	4	4	4	4	5	4	0.34	)	
32	485	5	4	2	2	0		0.09	S14)	
	387	5	5						D2)	75
	421	6	6						D2)	
	478	2							D2)	
64	507	4							D2)	
	519	4	4						D2)	100
	514	4							D1)	
128	449	5	4	4	3	1		-0.12	S14)	
	48	3							D1)	
	470	5							D1)	83
	506								D1)	
	470								D1)	
256	524								D1)	
	401								D1)	100
	415								D1)	
512	515								D1)	100
1000	522	3							D2 hr.	100
4000	518	4							D1 hr.	100

[a] Twenty-four hour applications of undiluted sample.

[b] Scored according to Draize (maximum possible score = 8).

[c] Day after treatment in which rabbit died (D) or was sacrificed (S).

Table 3

Observations in Inhalation Toxicity Test of Fumes of Trivinyltin Chloride

Maximum Concentration in Chamber[1]	Rate of Air Flow[2]	Average Body Weight[3] - - days - -		Number of Deaths - - - days - - - -			Mortality
		0	21	0-3	4-7	over 7	
ppm	liters per min.	- - gm - - -					per cent
20	1.0	201	236				0
45	2.0	285 (278)	302			1	10
95	2.5	280 (324)	306	3	2		50
99	2.5	294 (302)	290	4			40
125	2.8	275 (311)	303	4	2	1	70
163	3.0	294	—	10			100
165	3.5	299	—	10			100
182	4.5	273	—	10			100
400	8.0	242	—	10			100

[1] Based on average recovery (25 per cent) obtained in analyses by Metal and Thermit Corporation.

[2] Rate of air flow through test material; total air flow was 8.0 liters per minute.

[3] Ten rats (5M, 5F) per group; parenthetical figures show initial weights of survivors.

Approximate Inhalation LD_{50} for Rats = 95 ± 14 ppm

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

C. H. Farr, PhD, DABT
Manager, Product Safety and Toxicology
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P.O. Box 1536
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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

APR 2 4 1995

EPA acknowledges the receipt of information submitted by your organization under Section 8(e) of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA §8(e) Document Control Number (e.g., 8EHQ-00-0000) assigned by EPA to your submission(s). Please cite the assigned 8(e) number when submitting follow-up or supplemental information and **refer to the reverse side of this page for "EPA Information Requests"** .

All TSCA 8(e) submissions are placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA §8(e) policy statement (43 FR 11110, March 16, 1978). Confidential submissions received pursuant to the TSCA §8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims. This information is required and should be submitted if not done so previously. To substantiate claims, submit responses to the questions in the enclosure "Support Information for Confidentiality Claims". This same enclosure is used to support confidentiality claims for non-CAP submissions.

Please address any further correspondence with the Agency related to this TSCA 8(e) submission to:

Document Processing Center (7407)
Attn: TSCA Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Washington, D.C. 20460-0001

EPA looks forward to continued cooperation with your organization in its ongoing efforts to evaluate and manage potential risks posed by chemicals to health and the environment.

Sincerely,

Terry R. O'Bryan

Terry R. O'Bryan
Risk Analysis Branch

Enclosure 12621A

Triage of 8(e) Submissions

Date sent to triage: 12/14/95 **NON-CAP** **CAP**

Submission number: 17621A TSCA Inventory: Y N D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX SBTOX SEN w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX CTOX EPI RTOX GTOX

STOX/ONCO CTOX/ONCO IMMUNO CYTO NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

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entire document: 0 1 2 **pages** 1, 2 **pages** 1, 2, 4, 5, 6

Notes:

Contractor reviewer : PMR **Date:** 5/18/95

CECATS\TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA:
Submission # 8EHQ-1092-12621 SEQ. A

TYPE: (INT) SUPP FLWP

SUBMITTER NAME: Elf Atochem North America, Inc.

SUB. DATE: 10/15/92 OTS DATE: 10/26/92 CSRAD DATE: 03/06/95

INFORMATION REQUESTED: FLWP DATE:
0501 NO INFO REQUESTED
0502 INFO REQUESTED (TECH)
0503 INFO REQUESTED (VOL ACTIONS)
0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:
(063) REFER TO CHEMICAL SCREENING
(076) CAP NOTICE

VOLUNTARY ACTIONS:
(0401) NO ACTION REPORTED
0402 STUDIES PLANNED/UNDERWAY
0403 NOTIFICATION OF WORKERS/USERS
0404 LABEL/MSDS CHANGES
0405 PROCESS/HANDLING CHANGES
0406 APP/USE DISCONTINUED
0407 PRODUCTION DISCONTINUED
0408 CONFIDENTIAL

CHEMICAL NAME:
Stannane, chlorotriethyl-
Trivinyltin dichloride

CAS#
10008-90-9
10008-90-9

INFORMATION TYPE:		P F C
0201	ONCO (HUMAN)	01 02 04
0202	ONCO (ANIMAL)	01 02 04
0203	CELL TRANS (IN VITRO)	01 02 04
0204	MUTA (IN VITRO)	01 02 04
0205	MUTA (IN VIVO)	01 02 04
0206	REPRO/TERATO (HUMAN)	01 02 04
0207	REPRO/TERATO (ANIMAL)	01 02 04
0208	NEURO (HUMAN)	01 02 04
0209	NEURO (ANIMAL)	01 02 04
0210	ACUTE TOX. (HUMAN)	01 02 04
0211	CHR. TOX. (HUMAN)	01 02 04
(0212)	ACUTE TOX. (ANIMAL)	01 (02) 04
0213	SUB ACUTE TOX (ANIMAL)	01 02 04
0214	SUB CHRONIC TOX (ANIMAL)	01 02 04
0215	CHRONIC TOX (ANIMAL)	01 02 04

INFORMATION TYPE:		P F C
0216	EPI/CLIN	01 02 04
0217	HUMAN EXPOS (PROD CONTAM)	01 02 04
0218	HUMAN EXPOS (ACCIDENTAL)	01 02 04
0219	HUMAN EXPOS (MONITORING)	01 02 04
0220	ECO/AQUA TOX	01 02 04
0221	ENV. OCCC/REL/FATE	01 02 04
0222	EMER INCI OF ENV CONTAM	01 02 04
0223	RESPONSE REQEST DELAY	01 02 04
0224	PROD/COMP/CHEM ID	01 02 04
0225	REPORTING RATIONALE	01 02 04
0226	CONFIDENTIAL	01 02 04
0227	ALLERG (HUMAN)	01 02 04
0228	ALLERG (ANIMAL)	01 02 04
0239	METAB/PHARMACO (ANIMAL)	01 02 04
0240	METAB/PHARMACO (HUMAN)	01 02 04

INFORMATION TYPE:		P F C
0241	IMMUNO (ANIMAL)	01 02 04
0242	IMMUNO (HUMAN)	01 02 04
(0243)	CHEM/PHYS PROP	01 02 04
0244	CLASTO (IN VITRO)	01 02 04
0245	CLASTO (ANIMAL)	01 02 04
0246	CLASTO (HUMAN)	01 02 04
0247	DNA DAM/REPAIR	01 02 04
0248	PROD/USE/PROC	01 02 04
0251	MSDS	01 02 04
0299	OTHER	01 02 04

TRIAGE DATA:

NON-CBI INVENTORY
YES
NO
(IN TRANSIT)

ONGOING REVIEW
YES (DROP/REFER)
NO (CONTINUE)
REFER

SPECIES
RAT
RBT

TOXICOLOGICAL CONCERN:
(LOW) Acute Oral Toxicity
(MED) Dermal Irritation
(HIGH) Acute Inhalation Toxicity, Acute Dermal Toxicity

USE:

PRODUCTION:

CAS SR

COMMENTS

12621A
Acute Inhalation Toxicity - High
Acute Dermal Toxicity - High
Dermal Irritation - Medium
Acute Oral Toxicity - Low

Acute inhalation toxicity is high based on an estimated LC_{50} of 95 ppm in rats. Mortality and corresponding doses (ppm) were 0/10 (20), 1/10 (45), 5/10 (95), 4/10 (99), 7/10 (125) and 10/10 (163, 165, 182, 400). Acute dermal toxicity is high based on an estimated LD_{50} of 24 mg/kg in rabbits. Mortality and corresponding doses (mg/kg) were 0/2 (8), 0/4 (16), 2/4 (24), 3/4 (32), 3/3 (64, 256), 4/5 (128) and 1/1 (512, 1000, 4000). Dermal irritation is medium based on moderate to severe irritation in rabbits. Acute oral toxicity is low based on an estimated LD_{50} of 1910 mg/kg in rats. Mortality and corresponding doses (mg/kg) were 0/10 (128, 512), 1/10 (256, 1024) and 3/10 (1448), 5/10 (2048), 9/10 (2896), and 10/10 (4096).